



International Civil Aviation Organization

CAR/SAM REGIONAL PLANNING AND EXECUTION GROUP (GREPECAS)

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(CNS/COMM/6)**

Santo Domingo, Dominican Republic, 30 June to 4 July 2008

CNS/COMM/6-IP/09

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Agenda Item 1

Communication systems developments

1.3 Follow up to the implementation of ATN and its applications

**The Federal Aviation Administration Air Traffic Service Message Handling System (AMHS)
Planning**

(Presented by United States)

Summary

This paper is a summary of the United States Federal Aviation Administration (FAA) plan to implement the Air Traffic Service Message Handling System (AMHS) service to support the ICAO AMHS Global Implementation Plan.

1. INTRODUCTION

1.1 The FAA implemented the AMHS in Salt Lake City, Utah in March 2005. The AMHS service currently operates with the AMHS in the Tokyo Area Control Center (ACC) utilizing the Aeronautical Telecommunications Network (ATN) router on X.25 sub-network protocol as specified in the APANPIRG ATN Router Interface Control Document. The FAA replaced its AMHS in Salt Lake City in September 2007 to provide TCP/IP interface as specified in ICAO Doc, 9880 Part II B. Figure 1 depicts the AFTN/AMHS infrastructure in association with its international connections.

2. FAA PLAN

2.1 The FAA completed its test platform at its Technical Center located in New Jersey in February 2006 and uses this facility to perform ATN/AMHS conformance tests with other States. The use of XOT over public internet will be a recommendation for testing of AMHS between FAA and other States prior to cut over.

2.2 The FAA test platform has been used to test a variety of AMHS vendors' equipment.

2.3 The FAA AMHS will support both translated-form (XF) and Common AMHS Addressing Scheme (CAAS) addresses. However, based on the guideline from the APANPIRG ATN Implementation Plan and the ICAO Doc. 9705 Edition 3, the FAA would like to support only the CAAS address scheme in the future.

2.4 The FAA has completed implementing the AMHS with dual stacks to support ATN X.25 subnet and TCP/IP version 4 using RFC1006.

2.5 The FAA is planning to implement another AMHS at its Atlanta (ATL) Center to support facility and network diversification. This will ensure SLC and ATL Centers can backup one another. ATL will support AMHS service to Europe, South America and Caribbean regions in 2008.

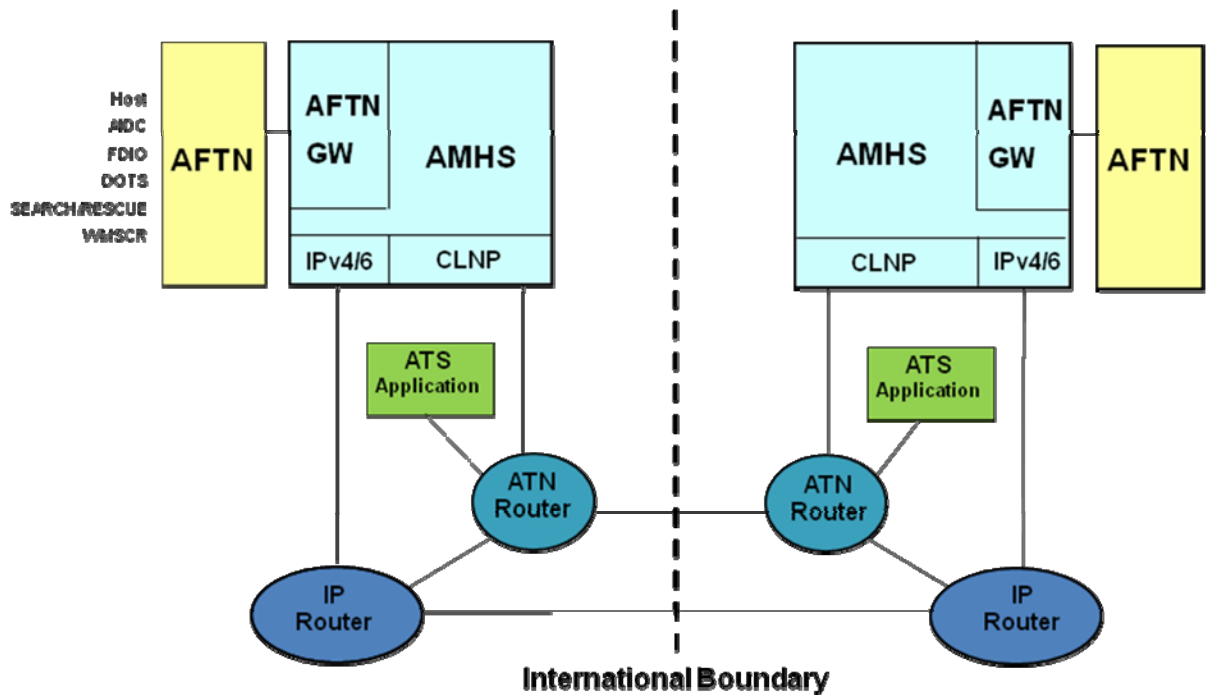


Fig 1: FAA ATN/AMHS Infrastructure

3 FAA LONG TERM PLAN

3.1 The FAA will implement RFC2126 when it becomes commercially available to support ICAO Doc. 9896 Internet Protocol Suite (IPS) Technical Manual which is expected to be published in November 2008.

3.2 The FAA is in the process of converting its internal telecommunication network to the Internet Protocol to reduce operational cost. FAA AFTN can support TCP/IP network protocol.

3.3 The FAA will continue to support ATN Open Systems Interconnection (OSI) via its ATN router but would not recommend further expansion of this network.

3.4 The AMHS will interface with FAA planned NextGen platform to communicate with future emerging network protocols and applications. This approach would allow future development of a network protocol or application to avoid building the Gateway at every State to support compatibility with AFTN or AMHS. Figure 2 depict the interface between AFTN/AMHS and NextGen platform.

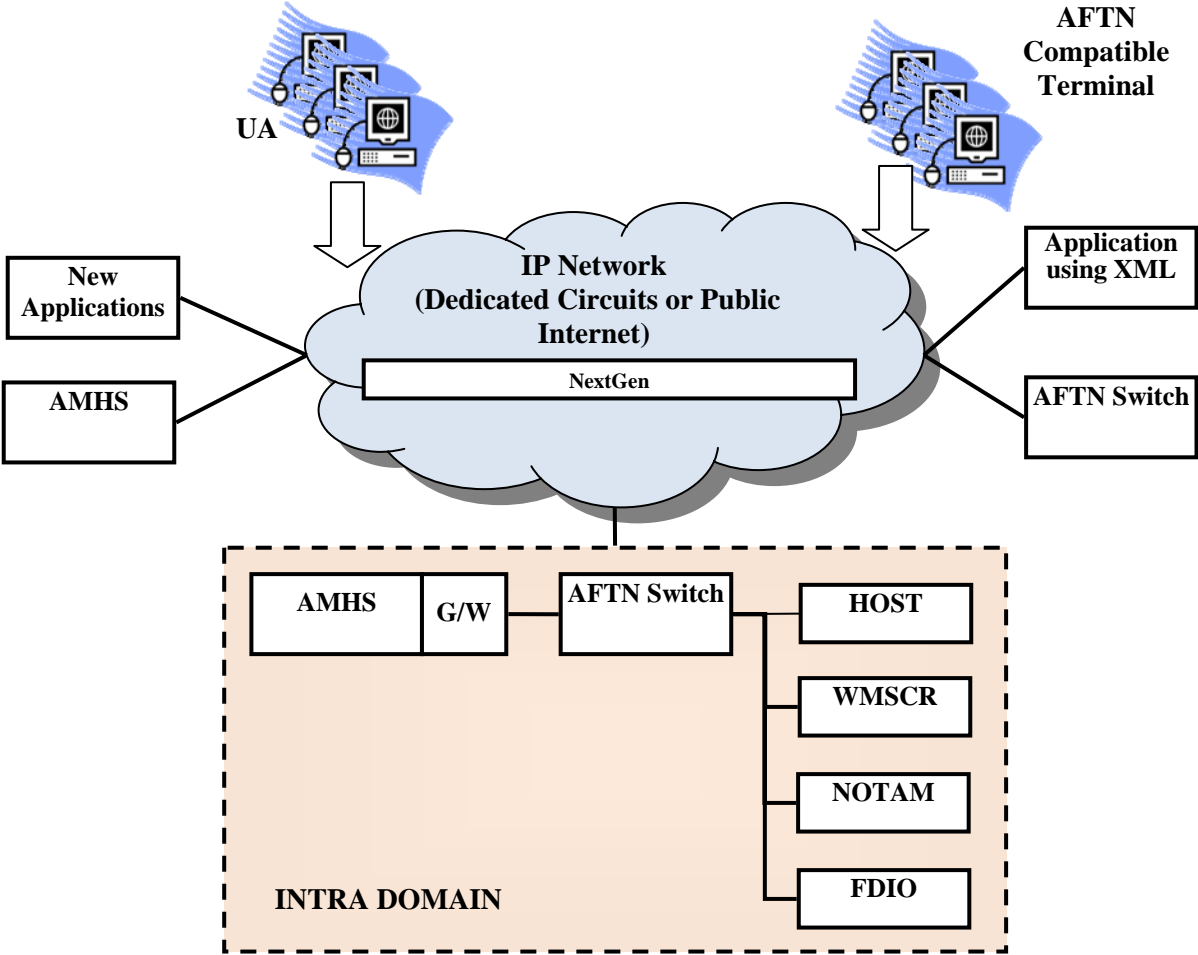


Figure 2. AFTN/AMHS and NextGen Interface

3.5 The following is specific information:

Contract Signed	Completed in 2005
CDR (Design Review)	Completed in 2007 to support IP
Factory Acceptance Test	Completed in 2007 for RFC1006
Installation Sites	Salt Lake City, Utah and Atlanta, Georgia
Site Acceptance Testing	Completed in 2007 for SLC with plan for RFC1006 at Atlanta in 2008
Training	Completed in 2005 with more training for RFC1006 in 2008
Transition	Continue to support NAS on existing AFTN
AMHS Transition	Australia: 2009 Fiji: 2009 New Zealand: planning Jamaica: 2009 with RFC1006 AMHS United Kingdom: 2008 for new AFTN and 2009 for AMHS over TCP/IP

4. CONCLUSION

4.1 Contracting States are invited to review the US plan. It is recognized that the IP interface will require a new IP protocol Interface Control Document, IP Routing Policy, IP Addressing Scheme and other implementation and operational related documents.

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